

## Cyberbullying of women on Twitter

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International Journal of Science and Technology Research Archive, 2024, 06(01), 017–031

Publication history: Received on 04 December 2023; revised on 31 January 2024; accepted on 03 February 2024

Article DOI: <https://doi.org/10.53771/ijstra.2024.6.1.0111>

### Abstract

Over 40% of American adults experience online harassment. As the nation struggles with questions of internet safety vs. freedom of speech, one must consider the impact of online abuse on victims. This paper builds on prior research of cyber harassment by extending the investigation to relational and societal-level effects of online harassment of women and potential moderating effect of support. Results revealed individual, relational and social impacts of cyberbullying. We discuss implications for addressing online harassment.

**Keywords:** Cyberbullying; Harassment; Online; Women; Twitter

## 1 Introduction

### 1.1 Use of social media

Social media plays an ever-increasing and undeniable role in our global culture (Wood, et al., 2016). With over 4.5 billion people accessing the internet regularly, including 3.8 billion using social media representing approximately 49% of the population (Kemp, 2020; Rouleau, et al., 2023) the time we spend scrolling our social media reveals how important this mode of communication is in our world today. Over half of American adults (ages 18-69) report posting comments on social media allowing the average person to share their own user-generated content with the world. In this way, the Internet provides infinite opportunities for online expression, sharing beliefs, and public discourse; yet cyber technologies also leave users vulnerable to negative and potentially hurtful experiences (Aiken, 2017).

Unfortunately, recent literature suggests women receive the most severe forms of cyber harassment including death threats and threats of sexual violence compared to men. While many studies show the detrimental effects of bullying on children, far less research exists on the effects of cyber harassment on women. We know cyberbullying increases rates of depression and anxiety among children. But does it do the same for women? Does cyberbullying extend beyond the individual's psychological health and affect relationships and civic engagement?

## 2 Defining Cyber Harassment

A recent, nationally representative survey of 4,248 U.S. adults found that 41% of Americans experienced cyber harassment and 66% witnessed these behaviors (PEW, 2017; Nadim, & Fladmoe, 2021). Online harassment involves threats of violence, invasion of privacy, slander aimed at damaging one's reputation, appeals for victims to be physically harmed, and technological attacks aimed at making the victim unwelcome and unsafe online (Fulantelli, et al., 2022). This includes receiving threatening emails contacting employers, professors, and supervisors who receive similar messages accusing the victim of misdeeds designed to make them unemployable (Citron, 2014). Researchers in cyber-harassment and civil rights law point out, not all attackers confine their harassment to online technologies, many

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harassers expand their abuse to include “real-space contact,” such as phone calls, vandalism, threatening mail, and physical assault (Citron, 2014; Frommholz, et al., 2016).

We often view anonymity as a contributing factor in facilitating the increase of online harassment (Lapidot-Lefler & Barak, 2012; Moore, Nakano, Enomoto, & Suda, 2012) with 86% of internet users reporting social media allowing anonymity. (PEW, 2017). Not only does anonymity reduce a victim’s ability to respond, but anonymity also protects the harasser from broader social consequences (Moore, Nakano, Enomoto, & Suda, 2012). Cyberspace lowers psychological restraints that would normally prevent an individual from acting and speaking inappropriately (Lapidot-Lefler & Barak, 2012; Joinson, 2007). This loss of inhibitions manifests in aggressive behaviors often not seen in offline situations.

Hundreds of thousands of people in the United States experience cyber-attacks annually. According to the director of the National Sexual Violence Resource Center, approximately 850,000 American adults experience cyber stalking each year (Ginty, 2011; Santos, et al., 2023). 59% of U.S. teens have personally experienced at least one of six types of abusive online behaviors (PEW, 2018). Evidence suggests increasing cyber-attacks with researchers predicting that between 30- 40% of Internet users will experience cyber harassment in their lives (Kaur, et al., 2021).

Some of the more severe forms of online harassment recently gained public awareness, from high-profile incidents involving women journalists and celebrities (Duggan, 2017; Valenzuela-García, et al., 2023). Actresses like Jennifer Lawrence spoke out against having their private, nude photos hacked and spread online without their permission suggesting the criminality of the act. Comedian Amy Schumer created a sketch for her television show, *Inside Amy Schumer*, where she satirizes the frequency with which women receive threats of rape and murder on *Twitter*. *Saturday Night Live* star, Leslie Jones, spoke out about her personal experience with online trolls’ attempts to silence and stifle her through harassment on social media.

Despite this publicity, public awareness differs on online harassment. In a study, most internet users reported hearing a great deal about hacking (95%) and trolling (86%), however far fewer reported hearing much about doxing (17%) or swatting (9%; PEW, 2017). This limited awareness highlights how most do not recognize the multiple forms of abuse many women face online.

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### 3 Prevalence of Harassment

Of the 41% of American adults who experienced at least one form of online harassment, 18% were victims of severe abuse, including physical threats (10%), stalking (7%), sustained harassment (7%), and sexual harassment. The number of online harassment victims grew since previously surveyed in 2014 when only 35% of Americans reported experiencing cyber harassment (PEW, 2017). Another form of harassment includes non-consensual sexual images that bombard victims. One study by PEW found an unexpected, invasive experience of non-consensual sexual imagery revealing an overwhelming pattern of women receiving unwanted explicit photos, lewd comments, and sexual harassment from men. Of all women surveyed, 32% reported receiving unwanted explicit images and 6% received explicit images of themselves shared without their consent. Of these younger women, more than half received unwanted explicit images (53%), a considerably higher percentage than their male peers (37%). False claims and the spread of untrue information can damage a victim’s reputation, as well as their relationships and careers. Shockingly, more than a quarter of all Americans dealt with false information posted about them online. These untrue statements spread lies about victims’ character and reputation (17%), relationships and sexual history, political views, job performance, religion, medical history, sexual identity, and gender identity. Past victims reported others lying about their education, criminal history, and occupation (PEW, 2017).

#### 3.1 Repeat victimhood

Those who experienced at least one form of online abuse are more likely to be targets of other forms of cyber harassment (PEW, 2017). For example, victims of some form of cyber harassment likely experience trolling (36% vs. 4%), hacking (22% vs. 14%), and doxing (6% vs. 1%; PEW, 2017). More than half (51%) of the victims of at least one form of cyber harassment were targets of untrue information spreading (compared to only 8% of individuals who otherwise experienced no cyber harassment). Similarly, 61% of Americans who experienced more severe forms of cyber harassment also were targets of misinformation attacks. Of these victims of severe harassment, 63% received unwanted explicit images and 21% had their explicit images shared without consent (PEW, 2017).

A well-publicized harassment case reveals how severe cyber harassment can get, consider the #Gamergate case. In 2013, an independent video game designer, Zoe Quinn, released a free game called *Depression Quest*, following the story of a young adult struggling with depression (Parkin, 2014). A few months later, Quinn’s ex-boyfriend, Eron Gjoni, wrote

a chain of intimate blog posts claiming she cheated on him with several men in the gaming industry, including a writer, Nathan Grayson, for the prominent gaming website Kotaku (Gjoni, 2014). Both parties involved denied the allegations. However, outraged gamers flocked to the internet, posting on *Twitter*, *Reddit*, and *4chan* their protests against these purported “ethical breaches in gaming journalism” (Dewey, 2014). Anonymous hackers posted Quinn’s personal information, including her home address and nude photos, onto *4chan*, an anonymous extreme right-wing digital bulletin board. Threats of rape, assault, and death were so specific and actionable, including exact times and locations for intended attacks, Quinn felt compelled to flee her home and call the police (Parkin, 2014). The stalkers even targeted the women who supported Quinn. Such attacks and silencing of women continue to this day on social media.

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#### 4 How Cyberbullying Differs by Gender

Surveys reveal that 41% of all Americans experienced online harassment (Duggan, 2017). However, women disproportionately receive the most severe forms of harassment online, and the threats they receive differ from the harassing messages men receive. While some men experience name-calling and embarrassment, more women experience sexual harassment and stalking (Duggan, 2014). In one study from the University of Maryland, researchers found that users with female names received on average, 25x as many private, malicious messages as male users. In addition, this study revealed that male users primarily target female users (Meyer & Cukier, 2006).

Many note that when men receive attacks online, the attack often focuses on the individual’s masculinity including their weakness and insecurities (Harriman, 2020). When men receive cyber-attacks focused on their character, these attacks aim to make the victim appear less masculine sexually, i.e. more like a woman. While only 5% of men report being harassed specifically because of their gender, women are more than 2x as likely to be targeted for their gender alone (PEW, 2017). Overall, 37% of women experienced cyber harassment, with 23% being called offensive names and 8% receiving physical threats (PEW, 2017). Overwhelmingly, women receive sexualized forms of online abuse, with 21% of women (18-29 years old) being sexually harassed, while only 9% of similarly aged men report these same experiences (PEW, 2017). Similarly, more than half (53%) of the women in this age group received an explicit image without request (Courtice, et al., 2021). Cyber-attacks faced by women often aim to target the victim’s sexuality in degrading ways. Victims have their sexually explicit photos exposed, drawn, or doctored into images depicting them being raped or ejaculated on, with false profiles and posts created on sites like Craigslist ads that appear to be seeking partners for rape role plays, and sexual videos shared on revenge porn sites (Filipovic, 2013; Flock, 2011; Sarkeesian, 2012). Sexual threats: almost always rape, and often paired with violence and threat of death represent the most widely experienced form of cyber harassment directed at women (Lapidus, Martin, & Luthra, 2009; West, 1997).

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#### 5 Effects of Cyber Harassment

##### 5.1 Individual-Level Effects

Cyber harassment can directly affect one’s mental health. Critical race scholar, Charles Lawrence, observed that racist speech evokes cultural lessons of inferiority to where we believe and live by these oppressive messages (Lawrence, 1990). Many similarities can be drawn to female victims of cyber harassment, who internalize these gendered messages of hate, shame, and worthlessness. Traditional offline bullying can lead to emotional and physical distress as anxiety, panic attacks, low self-esteem, loss of sleep, stress, headaches, and trust issues (Wolke & Lereya, 2015) with many victims suffering emotional distress such as PTSD, eating disorders, and depression (Shaw & Culbert, 2012; Praetorius, 2011). Extensive research exists on the impact of sexual offline harassment experiences and PTSD symptoms (Kang, Dalager, Mahan, & Ishii, 2005; Murdoch, Polusny, Hodges, & Cowper, 2006).

The personal narratives of those who experienced cyber harassment first-hand and the most telling examples of how online abuse affects the individual. Take for example Lena Chen, whose ex-boyfriend posted nude photos of her without her consent. Rather than receiving support, her college community harassed her:

Although many consider physical violence more harmful than verbal threats, research suggests that words powerfully affect the nervous system including the development of illness, alteration of one’s brain, and death of neurons, even shortening one’s life. Chronic stress can trigger the immune system to release proinflammatory cytokines causing physical illness and shrinking telomeres, leading to death. Emotion researchers argue if words cause stress, and prolonged stress leads to physical harm, then speech should be considered violence (Barrett, 2017; Morey, et al., 2015). Abusive language, as opposed to merely offensive language, can form a stronger relationship between speech and violence. While offensive speech can be readily tolerated by our bodies and brains with no negative effect on our nervous

system, abusive language damages one's health. Abusive speech involves prolonged exposure to stress, such as that experienced by victims of cyber-harassment (Barrett, 2017).

## 5.2 Relational-Level Effects

Trust plays a large role in many forms of cyber harassment, making romantic relationships particularly difficult for victims. Victims of revenge porn and leaked nude photos often develop trust issues, as their perpetrators are frequently ex-partners, who violated their trust in personal and intimate ways. Psychologists report how devastating cyber-attacks can be to an individual's psyche, especially considering the intimate nature of these transgressions (Li & Liu, 2021).

Of the 26% of Americans who had untrue information posted about them, 4% subsequently experienced problems with romantic relationships, 2% experienced difficulties at school, an additional 2% at work, and 1% suffered financial loss because of untrue statements online (PEW, 2017). Younger adults (18-29 years old) are especially likely to have false information posted about themselves and experience these after-effects at higher rates. Of these younger individuals, 15% reported damage to their reputation, 12% had problems with their friends and family, and 11% experienced problems in their romantic relationships because of false information online (PEW, 2017). Those with worse harassment experiences are even more likely to report a larger number of these types of relational consequences, including problems with friends and family and damage to their reputation (PEW, 2017).

Aside from the damage that cyber harassment can do to one's personal reputation, victims' professional and academic personas are equally at risk. In 2017, *Kaplan Test Prep* reported that 35% of surveyed admissions offices had reviewed college applicants' social media history (Scheff & Schorr, 2017). Software companies like *Varsity Monitor* frequently employ this monitoring for potential college scholarship recipients, reviewing up to four years' worth of social media activity before the university makes an official offer (Rajbhandari & Rana, 2022).

These same concerns over public profiles and content on social media also affect victims' professional opportunities. Many companies use similar software to monitor their employees' social media activity. A 2013-14 survey on social media and the workplace revealed that 80% of companies had a social media policy. As online personas become increasingly relevant for offline relations, employers continue to view cyber content as extensions of their employees, and representatives of their own brand. Aside from employers checking in on victims' profiles, coworkers frequently search for their fellow employees online. Practices like these can lead to negative repercussions for victims hacked or impersonated online, even as grounds for termination. For victims attempting to gain a new job, the application process is considerably harder by false and/or harassing content posted about them online. As more employers turn to social media to gather information about applicants, one's online presence reflects one's professional persona. In this way, cyber harassers affect a victim's career opportunities when spreading slanderous material and crude images.

## 5.3 Societal-Level Effects

### 5.3.1 Maintenance of patriarchal narratives

This migration of women out of cyber-spheres could lead to less diversity in online discussions, perpetuating the dominant discourses in society. Without a diversity of opinions, these dialogues will continue to reproduce society's dominant power relations within online communities (van Dijk, 2001; van Dijk, 2008). Within our current society, the dominant discourse is an often-unchallenged patriarchy that will continue to define the social, political, and economic lives of women. As Terry Real, an internationally recognized family and couple's therapist noted, the essence of masculinity is contempt for the feminine, such that to be a "man" includes not being like a woman. We often see misogyny and masculinity as the flip sides of the same coin.

A recent, international study of language used on Twitter explored social media's contribution to strengthening this patriarchal narrative. This study revealed a tendency for tweets to recreate "hegemonic discourses and traditional power relations in society" (Demirhan & Cakir-Demirhan, 2015, p. 308). This research revealed that most tweets related to women contributed to patriarchal views (93.9%), while just 6.1% provided an alternative discourse. The low number of tweets suggests a relative absence of more progressive, non-traditional values in women's roles being expressed on Twitter. Without the expression of alternative perspectives published on social media, dominant power relations will continue to go unchallenged in society.

### 5.3.2 Dissatisfaction with online communication

Research reveals that when one reads aggressive, uncivil comments in online discussions, users report reduced satisfaction with the discourse, increased anger towards the commenter, increased likelihood for similar uncivil

behavior, and less receptiveness to the conversation (Han & Brazeal, 2015; Walther, et al., 2018; Zimmerman & Ybarra, 2014). Lack of satisfaction with online arenas drives people away from global discussions and limits diversity of perspectives in open dialogues. Han and Brazeal's research on aggressive comments and social modeling shows that this effect worked in the opposite direction, such that when "civil" models were present, civility increased among users. Participants in the "civil" experimental group adopted the observed respectful tone in their own comments when expressing disagreement with others and reported greater willingness to take part in the discussion. Raters observed that this civil environment enhanced the online discussions, as additional perspectives were introduced and debated. This differed largely from the "uncivil" experimental group, who reported greater dissatisfaction with the discussion (Han & Brazeal, 2015).

### 5.3.3 Effects on witnesses

Research shows that people need not be the victim of cyber harassment to experience adverse effects from it. Solely witnessing the behaviors causes marked impacts. Shockingly, two-thirds of Americans reported witnessing abusive or harassing online behavior directed at others. Of these individuals, 39% reported witnessing severe targeted harassment, including stalking, physical threats, sustained harassment, and sexual harassment. These numbers increase in younger demographics with 86% of 18-29-year-olds witnessing harassment and 62% seeing severe forms of abuse. In the smallest form, people react to witnessing harassment by taking self-protective precautions, with 28% reporting they adjusted their privacy settings in response to witnessing another's abuse online. However, witnessing cyber harassment can also lead to more serious effects, such as silencing and exclusion. Over 27% of Americans report refraining from posting online after witnessing harassment, while an additional 13% stopped using an online site/service after witnessing harassment. Bearing witness to the harassment of others online negatively impacts one's mental health with 8% reporting that they felt "very anxious" after witnessing cyber harassment (PEW, 2017).

These statistics show the abundance of online harassment and the need for further investigation into the effects of these experiences. Because of this, we investigated the ways online harassment impacts women by exploring effects at the individual, relational, and societal levels. In addition, we examined if receiving support from others would impact the effect of cyber harassment.

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## 6 Method

We surveyed 424 self-identified women Twitter users about their experiences with cyberbullying including the potential effects at the individual, relational, and societal levels and participants' perception of support they received following cyberbullying.

After a thorough review of popular media and consideration of pre-existing measures including a range of online domains, including *Tumblr*, *Twitter*, *Reddit*, *Everyday Feminism*, *Buzzfeed*, and several news sources, such as *Huffington Post*, *The Guardian*, and *Time*, we developed several broad domains to encompass the proposed areas of effects we believed women may experience following online harassment including mental health, academic/occupational interference, relationships, personal reputation, social involvement, political expression, and online behavior.

To assess these proposed domains, we designed a survey based on relevant measures already in existence. We revised some measures to address length constraints and original open-ended questions to provide more detailed data. To accomplish these assessment tasks, we used questions from a recent 2017 survey on cyber harassment by the Pew Research Center, as well as the Trauma Screening Questionnaire, Civic Engagement Scale, Procedural and Distributive Just-World Beliefs Scale, Online Political Engagement Scale, and the Multidimensional Scale of Perceived Social Support. Measures in this survey included:

The cyber harassment survey comprised 8 questions aimed at gaining information about the responder's knowledge of, opinions towards, and experience of cyber harassment. These multiple-choice questions derived from the 2014 and 2017 Pew Research Center surveys on online harassment. We assessed the individual-level effects of cyber harassment by asking about emotional distress and symptoms of trauma using the Kessler Psychological Distress Scale-K-10 (Kessler et al., 2002) and the Trauma Screening Questionnaire (Brewin, et al., 2002).

We assessed relational-level effects of cyber harassment in an 8-question survey by asking about damage to the individual's reputation and employment, along with academic problems. These questions also sought to better understand the impact of cyber harassment on relationships with community members/organizations, friends, family, and romantic partners. Multiple questions about the relational-level impacts were taken from the Procedural and Distributive Just World Beliefs Scale (Lucas, Alexander, Firestone, & LeBreton; 2007). The procedural justice subscales

include questions related to the deservedness of rules, processes, and treatment toward self and others, whereas the distributive justice subscales measure beliefs regarding the deservedness of outcomes or allocations for self and others (Lucas, Alexander, Firestone, & LeBreton; 2011).

We assessed societal level effects of cyber harassment by asking about engagement in online spheres, involvement in social issues, expression of political opinions, and view of others and the world. We developed multiple questions using the Civic Engagement Scale (Doolittle & Faul; 2013) and Online Political Engagement Scale (OPeNS) (Pontes, Henn, Griffiths, & Pontes, 2017).

We examined the impact of support from others using a four-question survey. Through these questions, we sought to understand the effect of receiving support from others on individual, relational, and societal-level outcomes. Included in this section were items from the Multidimensional Scale of Perceived Social Support (Zimet, et al., 1998).

## 6.1 Data Analyses

### 6.1.1 Quantitative Data

To address our first question, we examined the relationship between cyber harassment experience and the effects at the individual, relational, and societal levels using a standard multiple linear regression analysis. The degree of cyber harassment experienced served as the dependent variable, with the *Kessler Psychological Distress Scale* (K10), *Trauma Screening Questionnaire* (TSQ), *Procedural and Distributive Justice World Beliefs Scale* (BJW), *Online Political Engagement Scale* (OPeNS), and the *Civic Engagement Scale* (CES) as independent variables. After inspecting the overall model for significance, we conducted Pearson correlations to determine if relationships existed between harassment experience and individual, relational, and societal measures.

We selected significant correlations with the degree of cyber harassment experience for a second standard multiple linear regression analysis. All significant relationships were then further investigated through standard multiple linear regression analyses that included the proposed moderator variable for the relationship between the degree of cyber harassment experience and individual, relational, and societal impacts. In each of these analyses, we entered the degree of cyber harassment experience as the outcome variable, with scores from the *Multidimensional Scale of Perceived Psychological Support* (MSPSS) entered as the moderator. We transformed both variables using grand mean centering in order to interpret lower-order interaction effects. Using these centered values, we created an interaction variable for harassment\* MSPSS. The significant individual, relational, and societal variables identified as significant in the previous analyses were used as the predictor variables for these regressions. Results were plotted into line graphs to review the analysis of the simple slope and determine the significance of the interaction variable.

### 6.1.2 Qualitative Data

We analyzed all narratives collected in this study using Consensual Qualitative Research (CQR). CQR allowed for in-depth examination of individual responses to open-ended questions, by involving several judges in the consensus-making process (Hill et al., 2005). Throughout the data analysis process, judges contributed their varied perspectives to reach a consensus regarding the meaning of the data. An auditor then reviewed the judges' determinations to minimize the effects of groupthink in compiling the research domains and deciding on core ideas (Hill et al., 2005).

### 6.1.3 Preliminary Analyses

Given research that cyber harassment primarily targets younger women, we conducted preliminary analyses of our major variables by race and age using an independent sample t-test to compare ratings of cyber harassment for individuals who identified as white and people of color. We found no significant difference in scores across races at individual, relational, and societal levels or perceived social support. A relative lack of diversity within our sample with less than 20% self-identified as non-White may explain these findings.

A one-way between-groups analysis of variance exploring the impact of age on the experience of cyber harassment and related effects by dividing our participants into four age groups; (18-29; 30-49; 50-64; 65+) revealed a statistically significant main effect in cyber-harassment experience across ages with women aged 18-29 reporting significantly more cyber-harassment experience than older aged groups. In addition, we found women aged 18-29 had significantly higher average ratings of psychological distress than those aged 30-49, but not those 65 years or older. Last, analyses revealed a statistically significant main effect in just world beliefs across ages with women aged 18-29 reporting significantly higher average ratings of beliefs in an unjust world than those aged 30-49, 50-64, and those aged 65 years or older.

## 7 Results

As expected, 74% (313) of our participants reported experiencing at least one form of cyber harassment. Examination of our first question on whether relationships existed between cyber harassment and individual (K10 & TSQ), relational (BJW), and/or societal (CES & OPEnS) effects, using a standard multiple linear regression analysis revealed that while the overall model was not significant, significant relationships existed between harassment experience and individual (K10), relational (BJW), and societal (CES) scores. As expected, we found positive correlations between the *Kessler Psychological Distress Scale* (K10) and reports of harassment ( $r = .29$ ), demonstrating that higher reports of harassment experiences correlated with more severe ratings of psychological distress. Similarly, at the relational level, the *Procedural and Distributive Just World Beliefs Scale* (BJW) revealed a positive relationship with harassment, demonstrating that more reports of harassment experiences correlated with stronger beliefs of injustice in distributive and procedural outcomes. While at the societal level, the *Civic Engagement Scale* (CES) negatively correlated with harassment, demonstrating that higher reports of harassment experiences correlated with stronger beliefs and involvement in civic engagement.

Excluding non-significant TSQ (*Trauma Screening Questionnaire*) and OPEnS (*Online Political Engagement Scale*) variables, a second multiple linear regression analysis led to expected overall model significance, with Adjusted  $R^2$  demonstrating that these variables account for 18.7% of the differences in cyber-harassment experiences. Three of the variables, the relational variable as assessed by the *Procedural and Distributive Just World Beliefs Scale* (BJW), made the largest unique contribution to the model and uniquely explained 8.1% of the variance in harassment experience. The individual-level variable (*Kessler Distress Scale*) then uniquely explained 6.3% of the variance in harassment experience. Last, the systemic variable (*Civic Engagement Scale*) uniquely explained 3.9% of the variance in harassment experience. As expected, we found a significant impact of cyber harassment at individual, relational, and societal levels. In sum, as cyber harassment experiences increased, so did reports of psychological distress and beliefs of distributive and procedural injustice while community engagement increased (see Table 1).

**Table 1** Regression Analysis Summary for Effects of Cyber Harassment at the Individual, Relational, and Societal Levels

Variable	B	SE B	$\beta$	r	p
(Constant)	0.19 (-1.62, 2.00)	0.92			0.836
K10	0.07 (0.03, 0.11)	0.02	0.25	0.29*	< .0005
BJW	0.23 (0.12, 0.34)	0.06	0.29	0.30*	< .0005
CES	-0.05 (-0.08, -0.02)	0.02	-0.20	0-.20*	0.004

Note.  $R^2$  adjusted = 0.187; \* $p < .001$

A much larger percentage of the dissatisfied sample reported receiving a lack of emotional support (approximately 27% as compared to only 1.6% of the satisfied sample). 21% of the dissatisfied respondents had their experience with harassment minimized or invalidated, as compared to only 9% of the satisfied sample. While 11.6% of the dissatisfied respondents identified receiving negatively expressed emotions from others (e.g., blame, shame, etc.), only 45% of the satisfied sub-sample received similar messages. Similarly, approximately 10% of the dissatisfied sub-sample identified being victim-blamed as a reason they were not satisfied with the support they received, while none of the satisfied respondents identified with this experience.

Even when participants in the dissatisfied group received emotional support, an even larger percentage identified being dissatisfied because no action was taken: “I know my friends both off- and on-line were doing their best to support me but I felt I had a huge breach of privacy and probably no amount of comfort would make me feel ‘safe’ again for quite some time.” Reports like this show that emotional support is not always enough to support victims of cyber harassment who need tangible action. Those in the dissatisfied sample identified having action taken as either neutral or rather even positive. Similarly, a far larger percentage of the dissatisfied sub-sample reported negative experiences with ineffective systems or policies (19.5%) than those in the satisfied sub-sample. Well-documented in the literature, attempts to address cyber harassment are frequently dismissed by others, including those responsible for legal or judicial protection (Avina & Donohue, 2002). Our qualitative data showed very similar findings among our sample of dissatisfied participants, with 36.6% reporting that their experiences were dismissed without action.

### 7.1 Social Support and Cyber-Harassment

Examination of our second research question on whether support from others impacts how one experiences cyber harassment at the individual, relational, and societal levels revealed no significant findings of social support (as measured by the Multidimensional Scale of Perceived Psychological Support; MSPSS) moderating the relationship between cyber harassment and outcomes at any level. However, of the 74% who reported experiencing cyber harassment, 209 participants reported seeking support. Of these 209 participants who sought support, 205 participants provided responses to open-ended questions about their experiences seeking support. The remaining four responses had missing or blank data. Judges identified 16 themes from the remaining 205 responses. From the 205 coded responses, 173 participants (84.4%) reported being satisfied with the support they received, while the remaining 15.6% of participants were not satisfied (see Table 2).

**Table 2** Coded Themes Regarding Support Received and Satisfaction: Total Sample

After sharing your experience(s), what was their response?	Total % of responses	Were you satisfied with the response – why or why not?	Total % of responses
Emotional Support	46.62	Felt Emotionally Supported	45.81
Tangible Action	27.44	Action Taken	23.79
Told to Ignore/ “Sign Off”	13.16	Dismissed Without Action	9.24
Denied/ Minimized		Lack of Emotional Support	6.17
“Other”	3.38	“Other”	4.85
Shock/Outrage	2.63	Ineffective Systems/ Policies	4.4
Negative Emotions	2.26	Accepted as Part of Internet	2.2
		Felt Safe	1.76
		Victim Blamed	1.76

Using a direct logistic regression, we assessed the impact of individual, relational, and societal outcomes on the likelihood that respondents would report that they were satisfied with the support they received after disclosing their cyber-harassment experience. We found all predictors (K10, BJW, and CES) were statistically significant, demonstrating the model distinguished between respondents who reported satisfaction and dissatisfaction with the support they received and explained between 13.5% and 24.6% of the variance in satisfaction, and correctly classified 85.7% of cases. As shown in Table 3, only one of the independent variables made a unique statistically significant contribution to the model (*Kessler Distress Scale*; K10). In sum, participants with higher ratings of psychological distress were more likely to report dissatisfaction with the social support they received after disclosing their cyber harassment.

**Table 3** Logistic Regression Predicting Likelihood of Reporting Satisfaction with Social Support

Variable	B	SE	Wald	df	p	Odds Ratio	95% CI for Odds Ratio
K10	0-.10	0.03	9.33	1	0.00	0.91	0.86 - .97
BJW	0-.15	0.08	3.23	1	0.07	0.86	0.73 - 1.01
CES	0.06	0.03	3.24	1	0.07	1.06	1.00 - 1.13
Constant	4.37	1.45	9.12		0.00	78.89	

In the sub-sample of “dissatisfied” participants (shown in Table 4), 20.9% reported that their cyber-harassment experience was denied or minimized (“*They thought I was overreacting*”) and 18.6% were told to ignore the harassment or “sign off” (“*For me to ignore and move on*”). Despite, 25.6% of participants in the dissatisfied group reporting receiving emotional support, these respondents overwhelmingly identified that they were ultimately left feeling unsatisfied with their support because no tangible action was taken to address the cyber harassment (36.6% of the dissatisfied sample; “*While I felt heard, I also felt like it was easy to dismiss*”). In addition, 19.5% of this dissatisfied sample identified ineffective systems and/or policies as a main reason for their dissatisfaction (“*Honestly, companies aren’t trying to*



change. They send a pity "We're sorry this happened and will look into it" but they don't create meaningful consequences to regulate their moderation actions"). An additional 26.8% of these participants also identified a lack of emotional support as just one reason they felt dissatisfied with the response they received ("I just wanted to know I had support from the community. In the case where I did not, I didn't feel comfortable in the community after that").

**Table 4** Coded Themes Regarding Support Received and Satisfaction: Dissatisfied Sample

After sharing your experience(s), what was their response?	% Dissatisfied responses	Were you satisfied with the response – why or why not?	% Dissatisfied responses
Emotional Support	25.58	Dismissed Without Action	36.59
Denied/ Minimized	20.93	Lack of Emotional Support	26.83
Told to Ignore/ "Sign Off"	18.8	Ineffective Systems/ Policies	19.51
Tangible Action	16.28	Victim Blamed	9.76
Negative Emotions	11.63	Felt Emotionally Supported	7.31
"Other"	4.65	Accepted as Part of Internet	-
Shock/Outrage	2.33	Action Taken	-
		Felt Safe	-
		"Other"	-

Among the "satisfied" sub-sample (see Table 5), 50.2% of the participants reported receiving emotional support ("They reassured me and told me they were supportive of me no matter what") with 53.7% of these participants identifying feeling emotionally supported as one reason they felt satisfied with the response they received ("It made me feel better to talk about it with my family and know I had their support"). An additional 29.9% of the satisfied sub-sample received a recommendation for tangible action to address the cyber harassment ("She showed me how to report the incident") and 29.8% identified that having action taken was one reason they felt satisfied ("Action was taken to remove the offender from the website").

**Table 5** Coded Themes Regarding Support Received and Satisfaction: Satisfied Sample

After sharing your experience(s), what was their response?	% Satisfied responses	Were you satisfied with the response – why or why not?	% Satisfied responses
Emotional Support	50.23	Felt Emotionally Supported	53.72
Tangible Action	29.86	Action Taken	29.79
Told to Ignore/ "Sign Off"	12.22	"Other"	5.85
Other"	3.62	Dismissed Without Action	3.19
Shock/Outrage	2.71	Accepted as Part of Internet	2.66
Denied/ Minimized	0.9	Felt Safe	2.13
Negative Emotions	0.45	Lack of Emotional Support	1.6
		Ineffective Systems/ Policies	1.06
		Victim Blamed	-

## 8 Discussion

While our research did not result in a significant relationship between a specific PTSD diagnosis (non-significant *Trauma Screening Questionnaire* scores; TSQ) as seen in offline harassment, we found the experience of cyber harassment significantly correlated with higher ratings of psychological distress. Although psychologists likened the reactions to cyber harassment with post-traumatic stress disorder (Nielsen, et al., 2015), it is understandably more

likely that participants endorse general psychological distress without identifying specific symptoms of trauma. Our findings suggest that the more one experiences cyber harassment, the more psychological distress results. Thus, even if cyber harassed individuals do not experience symptomology representative of trauma, it should not be assumed there are no negative psychological effects. This finding builds off of previous research that traditional bullying can lead to emotional and physical distress and supports our hypothesis that cyber harassment similarly affects mental health. These findings further support research by PEW, that those who experienced more severe forms of cyber harassment are more likely to report strong, psychological reactions to their abuse (PEW, 2017).

In line with previous research (Zhu, et al., 2021) and expected findings, the experience of cyber harassment significantly correlated with negative effects at the relational level, such that as cyber harassment increases, one is more likely to believe that the world is unjust. This finding suggests that cyber harassment experiences negatively biased expectancies for relationships with others.

As expected, our findings showed negative individual and relational effects of cyber harassment but highlighted positive signs of resilience at the societal level. Rather than seeing victims of cyber harassment recede from society, our findings show increased beliefs and involvement in civic engagement (Wemmers, et al., 2022). This finding offers a positive avenue for empowering victims of cyber harassment to engage in creating positive change for the improvement of online safety and security. Despite this finding, our research did not result in a significant relationship with online political engagement. One potential explanation for this finding is that while our measure specifically explores behaviors related to using online sources for researching politics, it does not measure offline research of politics, nor does it consider actual political engagement. It is possible that the CES tapped into some of these other facets of engagement, by being more inclusive of both on and offline behaviors.

While our quantitative measure of social support (MSPSS) did not result in a significant moderating relationship between cyber harassment and effects at any level, our qualitative data showed a significant relationship between participants' satisfaction with their support and the amount of psychological distress they experienced. Our sample skewed towards most participants identifying themselves as satisfied with the support they received from others. This finding provides valuable insight into the importance and potential benefit of receiving support. Whereas the MSPSS is a general measure of one's perceived social support, our qualitative data specifically targeted the support received in response to a cyber harassment incident. In doing so, our qualitative data not only highlighted the most frequent forms of support received but also the forms of support that were regarded as being most and least helpful for recipients. For example, participants with higher ratings of psychological distress more likely reported being dissatisfied with the social support they received after disclosing their experience with cyber harassment. Our qualitative data shows that the most helpful forms of support included a combination of emotional support and tangible action.

Alongside frequent dissatisfaction of social support, participants also experienced discontent with legal support. The lack of action taken by law enforcement to stop cyber harassment of women often leads many to believe the legal system is not protecting them. However, Section 2261, Title 18 of the U.S. criminal code can cover cyber harassment and cyberstalking under its ban on interstate stalking, harassment, and domestic violence (18 U.S.C. § 1343., 2018). Unfortunately, the wording of these laws varies by state and is vague or outdated, making more recent forms of cyber harassment difficult to prosecute (Mishra, et al., 2022). Before reporting harassment to the police, many women first turn to the social media platform where they received the harassment. On Twitter, users with accounts shut down for violating Twitter's terms of service can simply create a new account with a fake name. Therefore, when a woman uses the "report abuse" feature on Twitter's webpage, there is nothing set in place to prevent the blocked harasser from simply creating a new account and attacking the victim again (Adams, 2018; Marwick, 2021).

The Communications Decency Act of 1996 protects social media platforms like Twitter from being held legally responsible for user's posts. However, Twitter must still protect its users' private information (such as the IP addresses of cyber-harassers' accounts) as well as from harassment. Nu Wexler, head of Twitter's public policy communications, has called attention to a chart published by the Electronic Frontier Foundation, listing Twitter high on their list for protective privacy rights in court. While this may be promising for individuals concerned with their privacy and First Amendment rights, it also shows that Twitter will not fight as strongly on the side of the harassed (Hess, 2014; Watson, 2015). These findings suggest clear guidelines for how one can effectively respond to those experiencing harassment. Within personal relationships, support is most effective when one expresses validating emotions, avoids comments that blame, minimize, or invalidate the victim's experience, and offer suggestions for action steps to address the harassment. Our respondents were often initially unaware of how to go about these steps or were met with ineffective systems after they attempted these steps. This suggests the need for better advertisement and education on the platforms themselves about setting up privacy restrictions, reporting procedures, and improved implementation of these policies within the platforms themselves.

These dismissive social attitudes halted a movement to end cyber harassment. Victims are unaware of what legal action they can take and often choose not to report cyber harassment to police officials under the belief that nothing can or will be done about it. Unfortunately, these victims are correct, as law enforcement continually do not act on victims' reports. One of the biggest reasons for this is the lack of training and technical skills within law enforcement surrounding crimes on the Internet (Harkin & Whelan, 2022). Overwhelmingly, the most common response many women receive after reporting their experiences of cyber harassment to police is that they should "turn off [their] computer and ignore it." When officials do not understand the technology and are not well-trained in the laws aimed at targeting attacks on these platforms, they do not provide adequate support to victims, leaving many women to deal with their attackers on their own. However, trying to get harassing content removed on one's own can be a challenging, lengthy process. Nearly 30% of those who have tried to get false information about themselves removed report being unsuccessful in their attempts. Of the lucky individuals who get this content taken down, many report the process to be difficult (46%; PEW, 2017).

There are many ways that the victim and their support system approach harassment. Quinn's decision to be vocal and upfront about the situation helped her get help and also raised awareness. When later interviewed about how she dealt with this harassment, Quinn responded, "*What I'd really like to see is more discussion around how to handle these kinds of hate mobs and astroturfing tactics, considering that it happened to other feminist groups three times this year already,*" (Hern, 2014). Quinn isn't alone in wondering how we should handle this new form of cyber-harassment, nor was she alone in receiving the harassment either. We need more research on what strategies help the victim dealing with malicious cyber intentions (Celuch, et al., 2023).

### 8.1 Balancing Safety and Free Speech

Despite over 60% of Americans considering online harassment to be a major problem, the public is divided over how to balance safety while maintaining freedom of speech. While many voice concerns over online harassment, the issue has been largely avoided because of this division regarding protection of free speech and prevention of abusive language. Although 43% of Americans overall say that offensive speech online is excused too frequently as not being a "big deal," the majority (56%) instead feel that offensive online content is being taken *too* seriously (PEW, 2017). While the public feels conflicted on how to best address this issue, many suggest online services intervening, stronger company policies, stronger laws, or even increased law enforcement involvement (Diomidous, 2016). Unfortunately, even when covering some of the most easily identifiable forms of harassment, media portrayals can skew public perception. McDonald and Charlesworth (2013) found that media descriptions of sexual harassment incidents focus on overtly sexualized conduct, presenting a limited scope of what makes up sexual harassment. This type of media coverage may lead the public to negate the many varied forms of sexual harassment, restricting their definitions to include only the most offensive abuses.

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## 9 Conclusion

This research contributed to the field by providing new insights on the relationship between exposure to online harassment and effects at the individual, relational, and societal levels for women. This research also considered the role of outside support on this interaction between harassment and outcomes. Because of the conflicting findings between our quantitative and qualitative data regarding support from others as a significant factor in one's psychological well-being, it is recommended that future research should aim to further clarify this potential moderating variable. Additional research should focus on psychological well-being and quality of relationships before, during and after cyberbullying. This type of longitudinal data would allow for a clearer picture of how support from others impacts psychological and social well-being after cyber harassment.

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### Compliance with ethical standards

#### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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